REMARKS/ARGUMENTS

Status of Claims

Claims 1, 3-8, 10, 11, and 18-21 stand rejected.

Claims 1, 11, 20, and 21 are currently amended.

Thus, claims 1, 3-8, 10, 11, and 18-21 are pending in this patent application.

The Applicants hereby request further examination and reconsideration of the presently claimed application.

Claim Rejections – 35 U.S.C. § 103

Claims 1-5, 7, 8, 11, 18, 19, and 21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Application Publication 2004/0141468 (*Christensen*) in view of U.S. Patent 6,167,058 (*Ward*). Claim 6 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over *Christensen* in view of *Ward* and U.S. Patent 6,675,208 (*Rai*). Claims 10 and 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Christensen* in view of *Ward* and U.S. Patent Application Publication 2003/0165230 (*Reuss*). Claims 3-8, 10, 11, 18, and 19 depend from claim 1. Thus, claims 1, 3-8, 10, 11, 18, 19, and 21 stand or fall on the application of the combination of *Christensen* and *Ward* to independent claims 1 and 21, and claim 20 stands or falls on the application of the combination of *Christensen*, *Ward*, and *Reuss* to independent claim 20. The United States Supreme Court in *Graham v. John Deere Co. of Kansas City* noted that an obviousness determination begins with a finding that **"the prior art as a whole in one form or another contains all"** **of the elements of the claimed invention**. *See Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 22 (U.S. 1966). The Applicants respectfully assert that the cited prior art fails to disclose all of the limitations set forth in independent claims 1, 20, and 21, and consequently does not render obvious claims 1, 3-8, 10, 11, and 18-21.

The combination of *Christensen* and *Ward* fails to render obvious claims 1, 3-8, 10, 11, 18, 19, and 21 because the combination of *Christensen* and *Ward* fails to disclose an index of subscriber type of the subscriber terminal. Claims 1 and 21 read:

1. A method for transferring subscriber location information in a network communication system, comprising:

determining, by a network access device, the subscriber location information when a subscriber accesses the network, wherein the subscriber location information comprises an identifier of the network access device, a slot number of the subscriber interface board, and a port number of a port of a subscriber interface board in the network access device;

converting, by the network access device, the subscriber location information into a code in an encoding format of a content of a field in a packet sent from the subscriber;

replacing, by the network access device, the content of the field in the packet with the subscriber location information code, and transferring the packet in the network communication system,

wherein said subscriber location information code comprises:

one or more indexes of broadband access device number, device frame number, slot number, and port number that are required to identify the subscriber location information;

an index of MAC address of the subscriber terminal;

an index of subscriber type of the subscriber terminal; and

one or more indexes of priority and protocol encapsulation mode that describe subscriber characteristics.

21. A network access device, comprising:

means for determining a subscriber location information when a subscriber accesses the network;

means for converting the subscriber location information into a code in an encoding format of a content of a field in a packet from the subscriber;

means for replacing the content of the field in the message with the subscriber location information code, and transferring the message in the network communication system;

wherein the subscriber location information comprises an identifier of the network access device, a port number of a port of a subscriber interface board in the network access device, a slot number of the subscriber interface board, and a Media Access Control, MAC, address of a subscriber terminal; wherein the subscriber accesses the network via the port of the subscriber interface board,

wherein said subscriber location information code comprises:

one or more indexes of broadband access device number, device frame number, slot number, and port number that are required to identify the subscriber location information;

an index of MAC address of the subscriber terminal;

an index of subscriber type of the subscriber terminal; and

one or more indexes of priority and protocol encapsulation mode that describe subscriber characteristics.

(Emphasis added). As shown above, claims 1 and 21 require an index of subscriber type of the subscriber terminal. Such a feature may allow information about the subscriber type, e.g. the subscriber is a personal subscriber or a subscriber in a network café, to be transferred in the network and obtained by a BARS/SR. Therefore, more extended service features can be carried out according to the subscriber type information. *Christensen* fails to disclose an index of subscriber type of the subscriber terminal. Similarly, *Ward* fails to disclose an index of subscriber type of the subscriber terminal. As such, the combination of *Christensen* and *Ward* fails to disclose all of the elements of independent claims 1 and 21, and consequently fails to render obvious claims 1, 3-8, 10, 11, 18, 19, and 21.

The combination of *Christensen*, *Ward*, and *Reuss* fails to render obvious claim 20 because the combination of *Christensen*, *Ward*, and *Reuss* fails to disclose that converting the subscriber location information comprises converging the subscriber location information to an intermediate

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variable ID, and then mapping the intermediate variable ID to the subscriber location information code. Claim 20 reads:

> 20. A method for transferring subscriber location information in a network communication system, comprising:
>
> determining, by a network access device, the subscriber location information when a subscriber accesses the network;
>
> converting, by the network access device, the subscriber location information into a 48-bit subscriber location information code in an encoding format of a Media Access Control, MAC, address carried in a packet sent by the subscriber;
>
> replacing, by the network access device, the MAC address in the message with the subscriber location information code, and transferring the message in the network communication system,
>
> wherein said 48-bit subscriber location information code comprises: 5 bits, index of the MAC address of a subscriber terminal; 7 bits, index of an identifier of the network access device; 7 bits, index of a port number of a port through which the subscriber accesses the network; and 5 bits, index of a slot number of a subscriber interface board having the port, and
>
> **wherein converting the subscriber location information comprises:**
>
> **converging the subscriber location information to an intermediate variable ID, and then mapping the intermediate variable ID to the subscriber location information code.**

(Emphasis added). As shown above, claims 1 and 21 require that converting the subscriber location information comprises converging the subscriber location information to an intermediate variable ID, and then mapping the intermediate variable ID to the subscriber location information code. Such a feature may allow a more sophisticated "many bits to 24 bits" convergence HASH algorithm may be used. For example, the information may be converged to intermediate variable IDs first and then mapped from the intermediate variable IDs to a 48-bit subscriber location information code. In contrast, *Christensen* discloses a one-to-one mapping relationship:

> A node that autonomously uses locally assigned MAC addresses is an access point for network traffic, and must respond like any network interface. The interface needs to respond to and manage the mapping of all assigned MAC addresses. The mapped network traffic may originate from sources such as a port, user, or sessions, and the like. Even Ethernet traffic may be remapped through, for example an access node, so that the original MAC address is interchanged with a locally administered virtual MAC address. This can prevent subscriber spoofing and provide the network operator with control of the Ethernet traffic. **The mapping is done one-to-one.**

Christensen, ¶ 25 (emphasis added). As shown above, *Christensen* does not disclose that converting the subscriber location information comprises converging the subscriber location information to an intermediate variable ID, and then mapping the intermediate variable ID to the subscriber location information code. Similarly, *Ward* and *Reuss* fail to disclose that converting the subscriber location information comprises converging the subscriber location information to an intermediate variable ID, and then mapping the intermediate variable ID to the subscriber location information code. As such, the combination of *Christensen*, *Ward*, and *Reuss* fails to disclose all of the elements of independent claim 20, and consequently fails to render obvious claim 20.
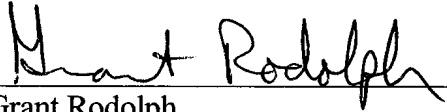
CONCLUSION

Consideration of the foregoing amendments and remarks, reconsideration of the application, and withdrawal of the rejections and objections is respectfully requested by the Applicants. No new matter is introduced by way of the amendment. It is believed that each ground of rejection raised in the Final Office Action dated August 17, 2009, has been fully addressed. If any fee is due as a result of the filing of this paper, please appropriately charge such fee to Deposit Account Number 50-1515 of Conley Rose, Texas. If a petition for extension of time is necessary in order for this paper to be deemed timely filed, please consider this a petition therefore.

If a telephone conference would facilitate the resolution of any issue or expedite the prosecution of the application, the Examiner is invited to telephone the undersigned at the telephone number given below.

Respectfully submitted,
CONLEY ROSE, P.C.

Date: 11/17/09

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